

# इंटरनेट

# मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 7766 (1975): Twist Drills for Jig Boring Machines [PGD  
32: Cutting tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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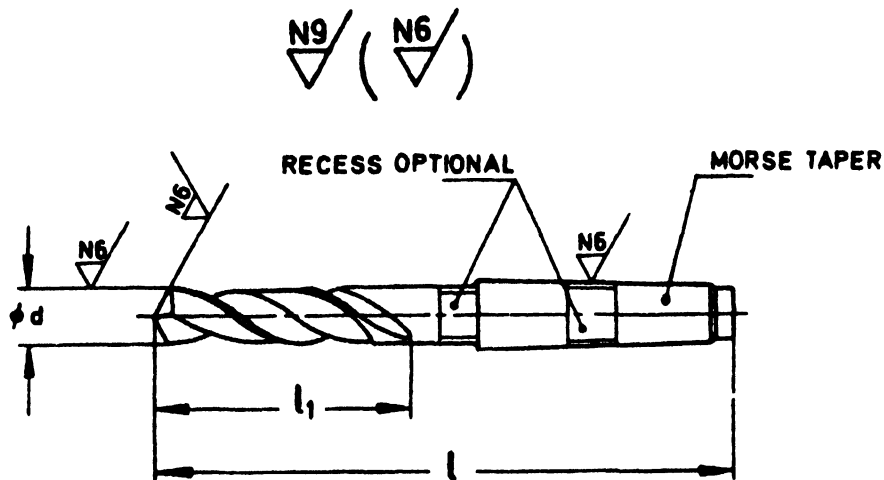




Indian Standard  
SPECIFICATION FOR  
TWIST DRILLS FOR JIG BORING MACHINES

1. Scope — Covers the dimensions and requirements for twist drills for jig boring machines.

2. Dimensions



All dimensions in millimetres.

Preferred Size $d$ h8	Range of Diameter $d$		Morse Taper No. (Draw-In Thread)							
	Over	Up to and Including	MT 1 (M6)		MT 2 (M10)*		MT 3 (M12)		MT 4 (M16)†	
			$l_1$	$l$	$l_1$	$l$	$l_1$	$l$	$l_1$	$l$
3.2	3.00	3.35	43	115						
3.7	3.35	3.75								
4.2	3.75	4.25								
4.7	4.25	4.75	45	120						
5.2	4.75	5.30								
5.7	5.30	6.00								
6.7	6.00	6.70	55	130	55	142	55	160		
—	6.70	7.50								
7.7	7.50	8.50								
8.7										
9.5	8.50	9.50								
10.5	9.50	10.60	60	135	60	147	60	165		
11.5	10.60	11.80								
(12.5)	11.80	13.20							60	195

\*Draw-in thread size M8 may be used as a second choice.

†Draw-in thread size M14 may be used as a second choice.

(Continued)

Adopted 28 August 1975

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Gr 2

All dimensions in millimetres.

Preferred Size $d$  h8	Range of Diameter $d$		Morse Taper No. (Draw-In Thread)							
	Over	Up to and Including	MT 1 (M6)		MT 2 (M10)*		MT 3 (M12)		MT 4 (M16)†	
			$l_1$	$l$	$l_1$	$l$	$l_1$	$l$	$l_1$	$l$
13.5	13.20	14.00	—	—	70	157	70	175	70	205
(14.5)	14.00	15.00								
15.5	15.00	16.00								
16.5	16.00	17.00								
17.5	17.00	18.00								
(18.5)	18.00	19.00	—	—	90	183	90	200	90	225
19.5	19.00	20.00								
(20.5)	20.00	21.20								
21.5	21.20	22.40								
(22.5)	22.40	23.02								
(23.5)	23.02	23.60	—	—	105	198	105	215	105	240
24.5	23.60	25.00								
(25.5)	25.00	26.50								
(26.5)	26.50	28.00								
27.5	28.00	30.00								
(28.5)	30.00	31.50	—	—	—	—	125	235	125	260
29.5	31.50	31.75								
31	31.75	33.50								

**Note 1** — The figure is indicative of dimensions only and does not specify the design features.

**Note 2** — Non-preferred sizes are given within parentheses.

\*Draw-in thread size M8 may be used as a second choice.

†Draw-in thread size M14 may be used as a second choice.

### 3. Tolerances

**3.1** The flute length  $l_1$  and overall length  $l$  may vary between corresponding lengths specified for the preceding and the following ranges of diameters.

**3.2** The tolerance for the shortest and largest flute length  $l_1$  and overall length  $l$  shall be equal to the difference in length of the next size, equal magnitude being applicable to plus or minus side.

### 4. General Requirements

**4.1** 'Tool type', unless otherwise specified: N according to IS : 5099-1969 'Technical supply conditions for twist drills'.

**4.2** Hand of cutting, unless otherwise specified: Right.

**4.3** Permissible radial runout shall be 0.05 mm, *Max*.

**4.4** Twist drill shall be supplied with flutes of ground finish and land of lap finish.

**4.5** The diameter  $d$  shall be measured as near the point as practicable.

**4.6** The detailed dimensions of the point and cutting angles shall be at the discretion of the manufacturers ( see also IS : 5099-1969 for recommendations regarding 'tool types' ).

**4.7** In regard to the requirements not covered in this standard, it shall conform to the requirements of IS : 5099-1969.

**5. Sampling** — The sampling and criteria of acceptance shall be in accordance with IS : 7778-1975 'Methods for sampling small tools'.

**AMENDMENT NO. 2 DECEMBER 1996**  
**TO**  
**IS 7766 : 1975 SPECIFICATION FOR TWIST**  
**DRILLS FOR JIG BORING MACHINES**

*( Pages 2 and 3, clauses 4.1, 4.6, 4.7 and 7 ) — Substitute 'IS 5099 : 1983'*  
*for 'IS 5099 : 1969'.*

( PE 10 )

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Reprography Unit, BIS, New Delhi, India

**6. Designation**

**6.1** A twist drill for jig boring machine with diameter  $d = 24.5$  mm, morse taper 2, 'tool type' N, for right-hand cutting, conforming to this standard and made from high speed steel (HSS) shall be designated as:

**Twist Drill 24.5 X 2 IS : 7766 HSS**

**6.2** When required with 'tool type' other than N, an appropriate 'tool type' H or S shall be added in the designation, immediately after size.

**7. Tests** — Shall be carried out in accordance with IS : 5099-1969.

**8. ISI Certification Marking** — Details available with the Indian Standards Institution.

**EXPLANATORY NOTE**

In the preparation of this standard, assistance has been derived from DIN 1861-1962 'Spiralbohrer für Waagrecht-Koordinaten-Bohrmaschinen (Lehrenbohrwerke) (Twist drills, for jig boring machines)', issued by Deutscher Normenausschusses.